

PLEASE OPEN THE BOOKLET ONLY WHEN DIRECTED BY THE INVIGILATOR.

ಪರೀಕ್ಷಾ ಮೇಲ್ವಿಚಾರಕರು ನಿರ್ದೇಶನ ನೀಡಿದ ನಂತರವೇ ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆಯ ಪುಸ್ತಕವನ್ನು ತೆರೆಯತಕ್ಕದ್ದು.

Maximum Marks/ಗರಿಷ್ಠ ಅಂಕಗಳು : 100

Booklet Serial No.

Total Number of Questions/ಒಟ್ಟು ಪ್ರಶ್ನೆಗಳು : 100

36093

Maximum Time/ಗರಿಷ್ಠ ಸಮಯ : 2 Hours

CANDIDATES HAVE TO WRITE THE OMR SERIAL NUMBER IN THIS BOX
ಅಭ್ಯರ್ಥಿಗಳು ಓ.ಎಂ.ಆರ್. ಕ್ರಮಾಂಕವನ್ನು ಈ ಅಂಕಣದಲ್ಲಿ ಬರೆಯತಕ್ಕದ್ದು

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QUESTION PAPER VERSION CODE
ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆಯ ಆವರಣಿಕೆಯ ಸಂಕೇತ

A

IMPORTANT INSTRUCTIONS

Do not carry mobile phones and Calculators during the time of test.

You will lose your candidature if you do so.

1. Only **Blue** or **Black** colour ball point pen should be used for marking answers and writing OMR Sheet.
2. All the 100 questions are **compulsory** and carry **equal** marks.
3. Before opening the booklet, take out the OMR sheet kept inside the question paper carefully and write your name, registration number, Question paper version code, sign at the appropriate place on the OMR sheet and get the invigilator's signature in the place provided in the OMR.
4. Each question is followed by **four** answers, of which only one is complete and most correct. Please mark the answer which you feel is most correct and complete by fully darkening the oval of that answer in the OMR sheet.
5. **There is no negative marking. However if more than one response is marked for a question, the answer shall be evaluated as wrong option marked and the candidate shall be awarded zero marks for that question. Therefore, mark only one answer.**
6. In case the response marked by you on the OMR sheet matches the "Key of right answers" as provided by panel of experts, you will be awarded full marks for that question.
7. Do not fold, tear or smudge the OMR sheet. Do not leave any stray marks on the OMR sheet.
8. Blank space on back page of the question paper may be used for rough work.
9. **Questions are provided in Kannada and English. However in case of lack of clarity in Kannada version, English version may be referred to as correct.**
10. So go ahead. Best of luck.

ಬಹುಮುಖ್ಯ ಸೂಚನೆಗಳು

ಪರೀಕ್ಷೆಯ ಸಮಯದಲ್ಲಿ ಮೊಬೈಲ್ ಫೋನ್ ಮತ್ತು ಕ್ಯಾಲ್ಕುಲೇಟರ್‌ಗಳನ್ನು ತರಬಾರದು. ನೀವು ಇವುಗಳನ್ನು ಪರೀಕ್ಷಾ ಕೊಠಡಿಯೊಳಗೆ ತಂದಲ್ಲಿ ನಿಮ್ಮ ಅಭ್ಯರ್ಥಿತನವನ್ನು ನೀವು ಕಳೆದುಕೊಳ್ಳುತ್ತೀರಿ.

1. ಓ.ಎಂ.ಆರ್. ಹಾಳೆಯಲ್ಲಿ ಬರೆಯಲು ಮತ್ತು ಉತ್ತರಗಳನ್ನು ಗುರುತಿಸಲು ಕಡ್ಡಾಯವಾಗಿ ನೀಲಿ ಅಥವಾ ಕಪ್ಪು ಬಣ್ಣದ ಬಾಲ್ ಪೆನ್‌ನ್ನು ಉಪಯೋಗಿಸಿ.
2. ಎಲ್ಲಾ 100 ಪ್ರಶ್ನೆಗಳು ಕಡ್ಡಾಯ ಮತ್ತು ಸಮಾನ ಅಂಕಗಳನ್ನು ಹೊಂದಿರುತ್ತವೆ.
3. ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆಯನ್ನು ತೆರೆಯುವ ಮೊದಲು ಅದರ ಜೊತೆಯಲ್ಲಿರುವ ಓ.ಎಂ.ಆರ್. ಉತ್ತರ ಹಾಳೆಯನ್ನು ಸುರಕ್ಷಿತವಾಗಿ ಹೊರಗೆ ತೆಗೆಯುವುದು. ಓ.ಎಂ.ಆರ್. ಉತ್ತರ ಹಾಳೆಯ ನಿಗದಿತ ಸ್ಥಳದಲ್ಲಿ ನಿಮ್ಮ ಹೆಸರು, ನೋಂದಣಿ ಸಂಖ್ಯೆ ಮತ್ತು ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆಯ ಆವರಣಿಕೆಯನ್ನು ನಿಗದಿಪಡಿಸಿದ ಕೆಲಂಗಳಲ್ಲಿ ಭರ್ತಿ ಮಾಡುವುದು ಹಾಗೂ ಓ.ಎಂ.ಆರ್. ಉತ್ತರ ಹಾಳೆಯ ನಿಗದಿತ ಅಂಕಣದಲ್ಲಿ ಪರೀಕ್ಷಾ ಮೇಲ್ವಿಚಾರಕರ ಸಹಿ ಮಾಡಿಸುವುದು.
4. ಪ್ರತಿ ಪ್ರಶ್ನೆಗೆ ನಾಲ್ಕು ಉತ್ತರಗಳನ್ನು ಕೊಡಲಾಗಿದೆ. ಇವುಗಳಲ್ಲಿ ಒಂದು ಮಾತ್ರ ಪರಿಪೂರ್ಣ ಮತ್ತು ಸರಿಯಾದುದು. ಯಾವ ಉತ್ತರ ಪರಿಪೂರ್ಣ ಮತ್ತು ಸರಿ ಎಂದು ನೀವು ಭಾವಿಸುತ್ತೀರೋ ಅದನ್ನು ಓ.ಎಂ.ಆರ್. ಹಾಳೆಯಲ್ಲಿನ ಉತ್ತರದ ವೃತ್ತವನ್ನು ಸಂಪೂರ್ಣವಾಗಿ ಗುರುತು ಮಾಡುವ ಮೂಲಕ ದಾಖಲಿಸಿ.
5. ನಕಾರಾತ್ಮಕ ಅಂಕಗಳಿರುವುದಿಲ್ಲ. ಆದರೆ, ನೀವು ಒಂದಕ್ಕಿಂತ ಹೆಚ್ಚು ಉತ್ತರವನ್ನು ಒಂದು ಪ್ರಶ್ನೆಗೆ ನೀಡಿದರೆ, ಇವುಗಳನ್ನು ಮೌಲ್ಯಮಾಪನ ಮಾಡುವಾಗ ತಪ್ಪು ಆಯ್ಕೆ ಎಂದು ಪರಿಗಣಿಸಿ, ಆ ಪ್ರಶ್ನೆಗೆ ಶೂನ್ಯ ಅಂಕವನ್ನು ನೀಡಲಾಗುವುದು. ಆದ್ದರಿಂದ, ಒಂದೇ ಉತ್ತರವನ್ನು ಗುರುತಿಸಿ.
6. ಒಂದೊಮ್ಮೆ ನೀವು ಗುರುತಿಸಿದ ಉತ್ತರವು ತಪ್ಪು ಸಮಿತಿಯು ನಿರ್ದೇಶಿಸಿದ ಸರಿಯಾದ ಉತ್ತರಕ್ಕೆ ಹೊಂದಿಕೆಯಾಗುವುದಾದರೆ ಪೂರ್ಣ ಅಂಕಗಳನ್ನು ನಿಮಗೆ ನೀಡಲಾಗುವುದು.
7. ಓ.ಎಂ.ಆರ್. ಉತ್ತರ ಹಾಳೆಯನ್ನು ಮಡಚುವುದಾಗಲಿ, ಹರಿಯುವುದಾಗಲಿ, ಕೊಳೆ ಮಾಡುವುದಾಗಲಿ ಮಾಡಬಾರದು. ಓ.ಎಂ.ಆರ್. ಉತ್ತರ ಹಾಳೆಯಲ್ಲಿ ಅಸಭ್ಯ ರೀತಿಯ ಗುರುತು ಮಾಡಬಾರದು.
8. ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆಯ ಹಿಂದಿನ ಪುಟದ ಖಾಲಿ ಜಾಗವನ್ನು ನಿಮ್ಮ ಕರಡು ಕೆಲಸಕ್ಕೆ ಉಪಯೋಗಿಸಬಹುದು.
9. ಪ್ರಶ್ನೆಗಳನ್ನು ಕನ್ನಡ ಮತ್ತು ಆಂಗ್ಲ ಭಾಷೆಗಳಲ್ಲಿ ನೀಡಲಾಗಿದೆ. ಆದರೆ ಇವೆರಡರ ಮಧ್ಯೆ ಯಾವುದೇ ಅಸಪ್ಪತ್ತೆ ಕಂಡುಬಂದಲ್ಲಿ, ಆಂಗ್ಲ ಭಾಷೆಯ ಪ್ರಶ್ನೆಯನ್ನು ಸರಿಯಾದ ಪ್ರಶ್ನೆಯೆಂದು ಪರಿಗಣಿಸಿ.
10. ಮುಂದುವರೆಯಿರಿ. ನಿಮಗೆ ಶುಭವಾಗಲಿ.

[P.T.O.]

SEAL



1. Rajesh had Rs. 200 with him. He gave Rs. X to Arnav, Rs. X/2 to Shirin and Rs. X/2 to Chandan and he is left with no amount. The amount he gave to Shirin is

- A ✓ (A) Rs. 50 (B) Rs. 30 (C) Rs. 15 (D) Rs. 40

2. The income of A and B are in the ratio of 3 : 2 and their expenditures are in the ratio of 5 : 3. If each saves Rs. 1,000, then A's income is

- B (A) Rs. 9,000 (B) Rs. 6,000 ✓
(C) Rs. 3,000 (D) Rs. 4,000

3. In which light Photosynthesis process would be most effective ?

- D (A) Blue (B) Infrared (C) Ultraviolet (D) Red ✓

4. Which of the following is **NOT TRUE** ?

- A ✓ (A) Ammeter is a device used for producing electric current.
(B) An electric motor is a rotating device that converts electrical energy to mechanical energy.
(C) A galvanometer is an instrument that can detect the presence of electric current in a circuit.
(D) A coil of many circular turns of insulated copper wire wrapped closely in the shape of a cylinder is called solenoid.

5. The peninsular plateau of India is broadly divided into

- B ✓ (A) Malwa Plateau and Maikal Plateau
(B) Malwa Plateau and Deccan Plateau
(C) Maharashtra Plateau and Malwa Plateau
(D) Maikal Plateau and Deccan Plateau

6. Image formed by a plane mirror is

- D (A) Real, behind the mirror and small
(B) Real, at the surface of the mirror and of the same size as the object
(C) Virtual, behind the mirror and enlarged
(D) Virtual, behind the mirror and of the same size as the object ✓



7. The three elements most commonly found in chemical fertilizers are

- (A) Nitrogen, Phosphorous and Krypton
- (B) Nitrogen, Potassium and Phosphorous
- (C) Sulphur, Phosphorous and Sodium
- (D) Phosphorous, Sodium and Nitrogen

B

8. An artificial satellite stays in the orbit around the earth because

- (A) An engine in the satellite applies an upward force to balance its weight.
- (B) The earth's attraction produces the necessary centripetal acceleration.
- (C) The earth's gravity does not act on the satellite due to great distance between them.
- (D) The earth's attraction is balanced by the attraction of other planets.

B

9. Till about 200 million years ago, all the continents were bunched together into a single huge continent called

- (A) Tethis
- (B) Gondvana
- (C) Pangea
- (D) Angora

C

10. The proportion of radiation reflected to the amount received from the Sun is called

- (A) Insolation
- (B) Humidity
- (C) Precipitation
- (D) Albedo

D

11. In 2016, the first 'Made in India' electric bus has been launched by which Indian Company ?

- (A) Fiat India Automobiles Limited
- (B) Ashok Leyland
- (C) Tata Motors
- (D) Mahindra & Mahindra

B

12. Evaluate $\int \cos^{-1}(\sin x) dx$

- (A) $(\pi/2)x + x^2/2 + c$
- (B) $(\pi/4) + x^4/4 + c$
- (C) $x^2 + \pi x + c$
- (D) None of the above

A

13. Colour of the eye is determined by the colour of the

- (A) Iris
- (B) Cornea
- (C) Choroid layer
- (D) Sclerotic layer

A



14. The scale of a map is given as 1 : 3,00,00,000. Two cities are 4 cm. apart on the map. Find the actual distance between them.

- (A) 12000 Km. (B) 1200 Km. (C) 12 Km. (D) 120 Km.

15. Which of the following is not a Standing Committee of the Parliament ?

- (A) Committee on Public Undertakings
(B) Committee on Welfare of SC's and ST's
(C) Committee on Public Accounts
(D) Estimates Committee

16. Which one of the following will directly increase the Gross National Product ?

- (A) A rise in interest rate (B) A fall in national debt
(C) An increase in investment (D) A surplus in budget

17. What is dual pricing ?

- (A) Daily prices and weekly prices
(B) Price fixed by Government and price in open market
(C) Wholesale price and retail price
(D) Pricing by agents and pricing by retailers

18. ISRO has successfully launched weather satellite SCATSAT-1 in September 2016. It has also placed two co-passenger satellite PRATHAM and PISAT from educational institutes namely –

- (A) Mahatma Gandhi Institute of Rural Energy and Development, Bengaluru and Indira Gandhi National Open University
(B) Karnataka University, Dharwad and Jawaharlal Nehru Centre for Advance Scientific Research, Bengaluru
(C) IIT Bombay, Mumbai and Indira Gandhi National Open University
(D) IIT Bombay, Mumbai and PES University, Bengaluru

19. The maximum number of Anglo-Indians who can be nominated to the Lok Sabha is

- (A) 4 (B) 5 (C) 3 (D) 2



20. In case of disagreement on a bill, in the two houses of Parliament

- A ✓
 (A) A joint sitting of the two houses of Parliament is convened
 (B) The President cast a deciding vote
 (C) A special Parliamentary Committee is formed to resolve the situation
 (D) The Prime Minister Intervenes

21. Mohit's teacher asked him to tell the correct answer after performing the steps given below :

I. Round off 43, 98 and 250 to nearest Tens.

II. After rounding off, add them.

III. Round off the sum to the nearest Hundreds.

- (A) 480 (B) 350 (C) 300 ✓ (D) 400

22. If matrix $A = \begin{pmatrix} 1 & 1 & -2 \\ 2 & 1 & -3 \\ 5 & 4 & -9 \end{pmatrix}$, then $|A|$ is

- A ✓ (A) 0 (B) 1 (C) 3 (D) 6

23. Two matrices A and B are multiplied to get BA if

- A ✓
 (A) Number of rows of A is equal to columns of B
 (B) Number of columns of A is equal to number of rows of B
 (C) Both are rectangular
 (D) Both have the same order

24. A is a non singular matrix, then A^{-1} is

- B ✓
 (A) $1/|A| \text{ Adj } A$ ✓ (B) $\text{Adj } A/|A|$ (C) $|A| \text{ Adj } A$ (D) $|A|/\text{Adj } A$

25. If A is a skew symmetric matrix then A^t is

- C ✓
 (A) Diagonal Matrix (B) 0
 (C) $-A$ (D) A

A

(8)



26. The term 'Yavanapriya' mentioned in ancient Sanskrit texts denoted

- A ✓ (A) Pepper (B) A wildlife trophy
(C) Ivory (D) A painting using vegetable dye

27. To meet the educational needs of the people, the Madarasa – I – Nasiri was built in the reign of

- D (A) Akbar (B) Jalal-ud-din-Khilji
(C) Qutub ud din Aibak ✓ (D) Iltutmish

28. The text of the document called 'Mahzar' by which Akbar assumed the role of supreme arbiter in the matter of religion is found in

- B ✓ (A) Badauni's Muntakahab – Ul – Tawarikh
(B) Abul Fazl's Akbarnama
(C) Nizamuddin's Tabaqat – I – Akabari
(D) Arif Quandahari's Tarikh – I – Alfi

29. Lion capital belongs to which king at Sarnath ?

- B (A) Kanishka ✓ (B) Ashoka
(C) Chandragupta (D) Harsha

30. Jyothirao Phule founded the

- A ✓ (A) Sathya Shodhak Samaj (B) Prarthana Samaj
(C) Brahma Samaj (D) Arya Samaj

31. Which committee has been constituted by the Union Government to monitor bird flu situation in 2016 ?

- D (A) Anant Mashelkar Committee (B) K. V. Kamath Committee
(C) G. N. Bajpai Committee ✓ (D) Munialappa Committee

32. Which sea has been declared as world's largest marine protected area after the meeting of Commission for the Conservation of Antarctic Marine Living Resources consisting of 24 countries and European Union ?

- B (A) Dead Sea ✓ (B) Ross Sea
(C) Caspian Sea (D) Black Sea



33. What is the theme of the 2016 United Nations Day ?

(A) Peace for Humanity

(B) Freedom First

(C) Strong UN : Better World

(D) Goals for Peace

B

34. Who has been crowned as the Mr. Asia 2016 ?

(A) Manjeet Thakran

(B) G. Balakrishna

(C) Ryan Zhu

(D) Senthil Kumaran

B

35. The book "The Adivasi Will Not Dance" has been authored by whom ?

(A) Manu Chakravarthy

(B) Hansda Sowendra Shekhar

(C) E. V. Ramakrishnan

(D) Pradeep Sebastian

B

36. Which of the following is not divisible by 3 ?

(A) 6945

(B) 15287

(C) 393

(D) 2146587

B

37. There are 100 students in hostel. Food provision for them is for 20 days. How long will these provisions last, if 25 more students join the group ?

(A) 22 days

(B) 14 days

(C) 18 days

(D) 16 days

D

38. If 15 workers can build a wall in 48 hours, how many workers will be required to do the same work in 30 hours ?

(A) 24 workers

(B) 30 workers

(C) 10 workers

(D) 17 workers

A

39. An electric pole, 14 meters high, cast a shadow of 10 meters. Find the height of a tree that casts a shadow of 15 meters under similar conditions

(A) 12.5 meters

(B) 20.5 meters

(C) 12 meters

(D) 21 meters

D

40. Present ages of Anu and Raj are in the ratio of 4 : 5. Eight years from now the ratio of their ages will be 5 : 6. Their present ages are

(A) 20 years and 25 years

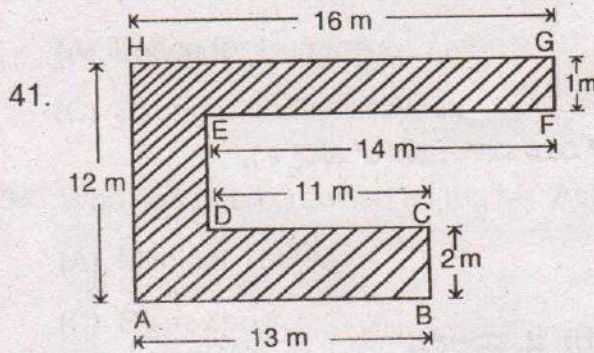
(B) 16 years and 20 years

(C) 32 years and 40 years

(D) 40 years and 50 years

C

A



Calculate the area of the shaded region in the figure

41. (A) 60 sq. m. (B) 65 sq. m. (C) 70 sq. m. (D) 56 sq. m.

42. The difference between the circumference and radius of a circle is 37 cm. The area of the circle is (take $\pi = 22/7$).

42. (A) 259 sq. cm. (B) 154 sq. cm. (C) 111 sq. cm. (D) 148 sq. cm.

43. The cost of fencing a square field at ₹16 per metre is ₹32,000. Find the cost of ploughing the field at ₹35 per 100 sq.m.

43. (A) ₹ 65,700 (B) ₹ 67,500 (C) ₹ 87,500 (D) ₹ 78,500

44. The length of a rectangle is $\frac{6}{5}$ of its breadth. If its perimeter is 132 mtr, what is the area of the rectangle

44. (A) 1380 sq. m. (B) 1300 sq. m. (C) 1080 sq. m. (D) 1800 sq. m.

45. The perimeter of a square and equilateral triangle are same. If the side of the equilateral triangle is 8 cm, what is the area of the square ?

45. (A) 24 sq. cm. (B) 16 sq. cm. (C) 36 sq. cm. (D) 64 sq. cm.

46. $(1 + \tan^2 A)/(1 + \cot^2 A) =$ _____

46. (A) $\tan^2 A$ (B) $\cot^2 A$ (C) $\sec^2 A$ (D) -1

47. $9 \sec^2 A - 9 \tan^2 A =$ _____

47. (A) 0 (B) 1 (C) -1 (D) 9



48. Which of the following statements regarding value of $\sin A$ or $\cos A$ is **TRUE** ?

- (A) It is always a rational number (B) It never exceeds 1
(C) It is never negative (D) It is never positive

49. Karnataka Government has launched "Mukhyamantri Santwana Harish Yojana" in March 2016. The scheme is meant for

- (A) Free treatment to accident victims
(B) Subsidy to women Self Help Groups (SHGs)
(C) Free LPG connections in the Hyderabad Karnataka region
(D) Subsidy to farmer of Cauvery basin

50. Which judicial committee on One Rank One Pension (OROP) has submitted its report to Ministry of Defence in October 2016 ?

- (A) L. Narasimha Reddy Committee (B) Prof. N.R. Madhava Committee
(C) H. Devraj Committee (D) Ramanujam Committee

51. In an examination 96% of the candidates passed and 50 candidates failed. How many candidates appeared ?

- (A) 1,500 (B) 1,250 (C) 480 (D) 200

52. The population of a town increases by 8% annually. If its present population is 1,42,560, what was the population an year ago ?

- (A) 1,13,000 (B) 1,32,000
(C) 1,42,000 (D) 1,23,000

53. If 35% of a number added to 39 is the number itself, the number is

- (A) 105 (B) 75 (C) 65 (D) 60

54. Two poles of heights 9 mtr. and 14 mtr. stand upright on a plane ground. If the distance between their feet is 12 mtr, find the shortest distance between their tops.

- (A) $12\sqrt{7}$ mtr. (B) 13 mtr.
(C) $13\sqrt{7}$ mtr. (D) 14 mtr.



55. Which of the following statements is **FALSE** ?

- (A) If two squares have equal areas they are congruent.
- B** ✓ (B) If two triangles have equal area they are congruent.
- (C) If two triangles are congruent then their corresponding sides and their corresponding angles are congruent.
- (D) If the hypotenuse and an acute angle of a right angle triangle are equal to the hypotenuse and the corresponding acute angle of another right angled triangle then the triangles are congruent.

56. A person is known to speak truth 3 out of 4 times. He throws a dice and reports that it is a six. Find the probability that it is actually a six.

- B** (A) $\frac{1}{12}$
- ✓ (B) $\frac{3}{8}$
- (C) $\frac{1}{4}$
- (D) $\frac{3}{6}$

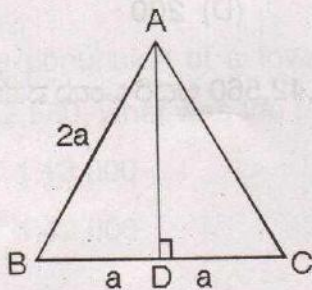
57. Evaluate Permutation 5P_5

- C** (A) 98
- (B) 125
- ✓ (C) 120
- (D) 25

58. $\sin [\pi/3 - \sin^{-1}(-\frac{1}{2})]$ is equal to

- A** ✓ (A) 1
- (B) $\frac{1}{4}$
- (C) $\frac{1}{2}$
- (D) $\frac{1}{3}$

59.



D

ABC is an equilateral triangle of side 2a. The altitude AD is equal to

- (A) 3a
- (B) a^2
- (C) 2a
- ✓ (D) $\sqrt{3} a$

60. $(\sqrt{2} - \sqrt{3})(\sqrt{3} + \sqrt{2})$ is

- C** (A) A natural number
- (B) An irrational number
- ✓ (C) A rational number
- (D) A whole number

A



61. Which Parliamentary Committee in India is normally chaired by a prominent member of the opposition ?

- (A) Public Accounts Committee
 (B) Privileges Committee
 (C) Committee on Government Assurances
 (D) Estimates Committee

62. An Amendment to the Constitution of India can be initiated by the

1. Lok Sabha
2. Rajya Sabha
3. State Legislature
4. President

- (A) 1 and 2
 (B) 2, 3 and 4
 (C) 1 alone
 (D) 1, 2 and 3

63. Hornbill Conservation Reserve, Aghanashini Conservation Reserve, Bedthi Conservation Reserve, Shalmala Riparian Ecosystem Conservation Reserve are situated in which District ?

- (A) Chamarajanagara
 (B) Uttara Kannada
 (C) Dakshina Kannada
 (D) Shivamoga

64. India, China and Russia are part of association of five major emerging National Economies called BRICS. The other two countries which are the members of BRICS are

- (A) Belgium and South Korea
 (B) Belgium and South Africa
 (C) Brazil and South Africa
 (D) Brazil and South Korea

65. Assume that each born child is equally likely to be a boy or a girl. If a family has two children, what is the conditional probability that both are girls given that the younger is a girl ?

- (A) $\frac{1}{4}$
 (B) $\frac{3}{4}$
 (C) $\frac{1}{2}$
 (D) $\frac{2}{3}$

66. Find the value of x and y from the pair of linear equations.

$$2x - y = 3$$

$$4x - y = 5$$

- (A) $x = 1; y = -1$
 (B) $x = 1; y = 1$
 (C) $x = -1; y = 0$
 (D) $x = 0; y = 1$



67. Evaluate $\int (\sin^6 x / \cos^8 x) dx$

(A) $\cos^7 x/7 + \sin^6 x/6 c$

(B) $\tan^8 x/8 + c$

(C) $\tan^7 x/7 + c$

(D) $\cos^6 x/6 + \sin^6 x/6 c$

68. Evaluate $\int \sin \sqrt{x} / \sqrt{x} dx$

(A) $\cos \sqrt{x} + c$

(B) $-2 \operatorname{cosec} \sqrt{x} + c$

(C) $-2 \cos \sqrt{x} + c$

(D) $\sec \sqrt{x} + c$

69. If matrix $A = \begin{pmatrix} 1 & a & a^2 \\ 1 & b & b^2 \\ 1 & c & c^2 \end{pmatrix}$, then $|A|$ is

(A) $(a + b + c)^2$

(B) $(a + b)(b + c)(c + a)$

(C) $(1 + a)(1 + b)(1 + c)$

(D) $(a - b)(b - c)(c - a)$

70. Which of the following Bhakti saints were contemporaries ?

1. Kabir
2. Guru Nanak
3. Dadu Dayal
4. Tukaram

Select the correct answer below using the codes given.

(A) 1 and 4 only

(B) 2, 3 and 4 only

(C) 1 and 2 only

(D) 3 and 4 only

71. The northern part of the Western Ghats is known as

(A) Neelagiri Range

(B) Kardamakam Range

(C) Sahyadri Range

(D) Annamalai Range

A



72. The Treaty of Mangalore was signed between

- (A) The French East India Company and Tipu Sultan
(B) Hyder Ali and Zamorin of Calicut
(C) The British East India Company and Hyder Ali
(D) The British East India Company and Tipu Sultan

73. Tulsidas, the author of Ramacharitamans, was contemporary of which of the following rulers ?

- (A) Akbar (B) Sher Shah Suri
(C) Humayun (D) Shahjahan

74. Under the Mountbatten Plan of 1947, the people of which of the following States/Districts (as they were then known as) were given the right to decide through a plebiscite whether they wish to join Pakistan or India ?

- (A) North West Frontier Province and the Silghat district of Assam
(B) Pratapgarh district of Rajasthan
(C) Kachchh district of Gujarat
(D) Punjab

75. Anticoagulant secreted by Leech is

- (A) Haemoglobin (B) Haematin (C) Heparin (D) Hirudin

76. The 2nd joint tactical exercise "Sino-India Cooperation 2016" has been held in which city ?

- (A) Jammu (B) Kachchh (C) Jaisalmer (D) Ladakh

77. Which of the following is a chemical change ?

- (A) Change of water into steam (B) Formation of ice cream from milk
(C) Magnetisation of an iron rod (D) Setting of cement concrete

78. Thangavelu Mariyappan has won Gold medal in Rio Paralympics 2016 in which of the following event ?

- (A) Men's Shot-put T-24 (B) Men's High Jump T-42
(C) 50 m. free style swimming (D) Weightlifting in 56 kg.



79. Archery is the national sport of which country ?

- D (A) India (B) Japan (C) Afghanistan (D) Bhutan

80. _____ has Cricket as its national sports.

- D (A) New Zealand (B) Sri Lanka (C) India (D) Jamaica

81. Which of the following organism has ink gland as a means of escape from predator ?

- C (A) Echinus (B) Unio (C) Sepia (D) Pila

82. Which of the following gains entry into the human body through open wounds ?

- B (A) Typhoid bacteria (B) Tetanus bacteria
(C) Tuberculosis bacteria (D) Cholera bacteria

83. All the sepals together is called as

- D (A) Thalamus (B) Corolla
(C) Stamens (D) Calyx

84. What is the generic name of Vitamin K ?

- A (A) Phytonadione (B) Biotin
(C) Retinol (D) Thiamine

85. Which of the following cannot be electrically charged easily by friction ?

- D (A) A woollen cloth (B) An inflated balloon
(C) A plastic scale (D) A copper rod

86. $\lim_{x \rightarrow 0} \frac{\sqrt{1 - \cos 2x}}{\sqrt{2} x}$ is

- D (A) 0 (B) -1
(C) 1 (D) does not exist

87. The theory of economic drain of India during British imperialism was propounded by

- A (A) Dadabhai Naoroji (B) R.C. Dutt
(C) Mahatma Gandhi (D) Jawaharlal Nehru



88. Fiscal deficit in the budget means

B

- (A) Primary deficit minus capital deficit
- (B) Budgetary deficit plus the net borrowings of the Government
- (C) Revenue deficit plus the net borrowings of the Government
- (D) Capital deficit plus revenue deficit

89. The first Indian woman to bag a medal in Rio 2016 Paralympics is

B

- (A) Sakshi Karmakar
- (B) Deepa Malik
- (C) Sakshi Malik
- (D) Deepa Karmakar

90. $\frac{3}{5}$ of a right angle and $\frac{1}{5}$ of a straight angle together forms

A

- (A) Right angle
- (B) Reflex angle
- (C) Obtuse angle
- (D) Acute angle

91. The phenomenon of scattering of a fine beam of light by the colloidal particles such as smoke, tiny water droplets, suspended particles of dust and molecules of air is called as

C

- (A) Newton effect
- (B) Joule effect
- (C) Tyndall effect
- (D) Spectral effect

92. The common refractive defect of human vision, Myopia also known as near sightedness, can be corrected by using

C

- (A) Convexo-convex lens
- (B) Cylindrical lens
- (C) Concave lens
- (D) Convex lens

93. Match the following.

- | | |
|--------------------------|----------------------------------|
| a. Charles Darwin | 1) Theory of Use and Disuse |
| b. Gregor Mendel | 2) Double helix structure of DNA |
| c. Watson and Crick | 3) Law of Independent Assortment |
| d. Jean-Baptiste Lamarck | 4) Natural Selection |

Codes :

A

- | | a | b | c | d |
|---|---|---|---|---|
| <input checked="" type="checkbox"/> (A) | 4 | 3 | 2 | 1 |
| (B) | 4 | 1 | 2 | 3 |
| (C) | 1 | 2 | 3 | 4 |
| (D) | 4 | 3 | 1 | 2 |

A



94. A solution turns red litmus blue, its pH is likely to be

- A ✓ (A) 8 (B) 7 (C) 0 (D) 6

95. Which of the following causes "wheat rust" in wheat ?

- D (A) Protozoa (B) Virus (C) Bacteria ✓ (D) Fungus

96. Which of the following is/are feature of the Dravida style of temple architecture ?

1. Curvilinear Shikara
2. Recessed Sculptures
3. Gopuram

Select the correct answer below using the codes given.

- D (A) 1, 2 and 3 (B) 3 only
(C) 1 and 2 only ✓ (D) 2 and 3 only

97. The Government of India has announced the 2016 All India ranking of "Ease of doing Business" on the basis of a 340 point business reform action plan and their implementation by the States. Which of the following State has topped the ranking ?

- A ✓ (A) Andhra Pradesh (B) Kerala
(C) Karnataka (D) Gujarat

98. India has won the 2016 Kabaddi World Cup by defeating

- C ✓ (A) Afghanistan (B) Pakistan
(C) Iran (D) Iraq

99. The 73rd Constitutional Amendment in 1992 has

- C ✓ (A) Provided Constitutional status to the National Commission for the Scheduled caste and Scheduled tribes
(B) Created new states of Chhattisgarh and Jharkhand
(C) Institutionalised the system of Panchayats
(D) All of the above

100. Which fungus produces aflatoxin ?

- B (A) *Trichoderma viride* ✓ (B) *Aspergillus flavus*
(C) *Penicillium notatum* (D) *Albugo candida*